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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ROBERT E. HUGHEY, COMMISSIONER

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TRENTON, N.J. 08625
609 - 292 - 2885

DIAMOND SHAMROCK CORPORATION
Health & Environmental Affairs

IN THE MATTER OF
DIAMOND SHAMROCK CHEMICALS COMPANY
AND MARISOL, INC. :
: ADMINISTRATIVE
: CONSENT ORDER

The following FINDINGS are made and ORDER is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "the Department") by Executive Order No. 40 (1983) signed by Governor Thomas H. Kean on June 2, 1983, N.J.S.A. App. A:9-45, N.J.S.A. 13:1D-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq.

FINDINGS

The Department hereby finds that:

1. Diamond Shamrock Chemicals Company (hereinafter "the Company"), formerly known as the Diamond Shamrock Corporation, operated a chemical manufacturing facility at 80 Lister Avenue (Block 2438, Lots 58 and 59) in Newark, New Jersey (hereinafter "Newark facility" or "the site") from March 1951 to August 1969 under the name Diamond Alkali Company. Among other chemicals, the Company manufactured 2,4-D, 2,4,5-T and 2,4,5 Trichlorophenol at the Newark facility.
2. The Company ceased production activities at the site in August 1969 and sold the property in March 1971 to Chemicaland Corporation, which may have conducted certain chemical manufacturing activities during the several years it owned and occupied the site.
3. Walter Ray Holding Company purchased the property at a tax sale in 1980 and held the premises until 1981. It is not known whether any chemical manufacturing activities occurred at the site during this time.

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4. Walter Ray Holding Company sold the property in June 1981 to Marisol, Inc., the current owner of the site, which undertook certain waste consolidation activities prior to renting certain portions (to wit: one warehouse) thereof to SCA Chemical Services Company. Additionally, Marisol, Inc. used one building on the site as a general business office.
5. In June 1983, the NJDEP determined that the soil at the Newark facility contained 2, 3, 7, 8 - TCDD (hereinafter "dioxin"). The Company, pursuant to Executive Order No. 40 (1983) and the Department's Administrative Order No. EO 40-6, thereupon undertook certain interim site stabilization measures including the placement of a suitable ground cover at the Newark facility. Placement of the tarp-like cover was intended to be an interim measure to minimize the spread of wind blown dust from the facility, while an acceptable final remedial action could be designed and implemented.

ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED AND AGREED THAT:

6. Marisol, Inc. and the Company shall maintain the existing fences along the property boundaries to restrict unauthorized access to the site.
7. The Company shall maintain the existing ground cover, or if necessary, install and maintain a replacement deemed suitable by the Department, at the Newark facility until the final remedial action plan is implemented.
8. Marisol, Inc. shall allow the Company to conduct an evaluation of the site and to implement a final remedial program for the site.
9. (a) The Company shall undertake, entirely at its own expense, a comprehensive evaluation of the site as set forth in Exhibit A, which is attached hereto and made a part hereof, to determine the levels of dioxin and other chemicals at the site. For the purposes of this Order, "other chemicals" shall be defined as the United States Environmental Protection Agency's (USEPA) 129 priority pollutants "plus 40" (See Part 1 of Appendix A). The Company shall also conduct, entirely at its own expense, a feasibility study of remedial action alternatives for the site as set forth in Part 4 of Exhibit A. As part of this study, the Company shall also

address the alternatives for removal or containment, at the Company's expense, of all drums and material stored at the site pursuant to the Department's Administrative Order No. EO 40-18.

- (b) Within forty-five (45) days after the effective date of this Order, the Company shall submit to the Department, for its review and approval, a comprehensive and detailed site evaluation plan which includes each of the items set forth in Parts 2 and 3 of Exhibit A. Within fifteen (15) days of receipt of the Department's comments on the site evaluation plan, the Company shall modify the plan as necessary to conform with said comments and submit the modified site evaluation plan to the Department. Within one hundred twenty (120) days after receiving the Department's final approval of the plan, the Company shall conduct and complete the site evaluation and submit a report detailing the results to the Department for its review and approval. Within fifteen (15) days of receipt of the Department's comments on the report, the Company shall modify the report as necessary to conform with said comments and submit the modified report to the Department. Any significant modification of the site evaluation plan or report required by the Department may be grounds to extend the 15 day or 120 day time period.
- (c) Within sixty (60) days after receiving the Department's final approval of the site evaluation report, the Company shall conduct and submit the feasibility study to the Department for public hearing and approval. The feasibility study shall identify and evaluate all potentially viable remedial action alternatives for the site. The feasibility study shall include a comparison of all such alternatives as to environmental and public health impacts, degree of confidence in success, time required for implementation and cost, including operation and maintenance costs. The feasibility study shall recommend the remedial action alternative deemed best suited to remove the dioxin and other chemicals from the site such that the levels of dioxin or other chemicals remaining on the site following the removal do not constitute a significant risk to public health or the environment. The determination as to what levels of dioxin or other chemicals constitute a significant risk to public health or the environment shall be made solely by the Department. If the feasibility study concludes, and the

Department agrees, that the removal of the dioxin and other chemicals is not practicable, the feasibility study shall recommend the remedial action alternative deemed best suited to contain the dioxin and other chemicals on-site in such a manner that the potential for public contact or migration into the environment is and will be eliminated to the maximum extent technically practicable.

10. Within sixty (60) days after approval of a remedial action alternative by the Department, the Company shall submit to the Department, for its review and approval, a detailed remedial action plan including a time schedule and any necessary engineering designs to implement the approved alternative. Within twenty (20) days of receipt of the Department's comments on the remedial action plan, the Company shall modify the plan as necessary to conform with said comments and submit the modified remedial action plan to the Department. After receiving the Department's final approval of the remedial action plan, the Company shall implement the plan in accordance with the approved time schedule.
11. If the removal of the dioxin or other chemicals from the site is not practicable, the Company, after implementing the approved remedial action alternative to contain the dioxin and other chemicals on-site, shall implement, after receiving the Department's approval, a maintenance program to insure the integrity of the remedial action and a monitoring program to detect and measure any migration of dioxin or other chemicals into the environment. At any time, the Company may apply to the Department for approval to discontinue or modify either program. The determination as to whether either program shall be discontinued or modified shall be made solely by the Department, based upon the monitoring results and current scientific information.
12. If the removal of the dioxin or other chemicals from the site is not practicable and the results of the monitoring and maintenance programs undertaken pursuant to paragraph 11 indicate migration of dioxin or other chemicals into the environment at levels which constitute a significant risk to public health or the environment, the Company shall, within one hundred eighty (180) days after the discovery thereof, submit to the Department, for its review and approval, a remedial action plan including a time schedule to prevent and correct said migration. After receiving the Department's approval of said plan, the Company shall implement the plan in accordance with the approved time schedule.

Prior to the preparation and implementation of such plan, the Company, subject to the approval of the Department, shall take such interim measures as are necessary to control or minimize said migration.

13. Within five (5) days after the effective date of this Order, the Company shall appoint a Facility Coordinator who shall be responsible for overseeing the implementation of this Order and the activities required herein.
14. Marisol shall allow the Department access to the site at all times for the purpose of monitoring compliance with the terms of this Order.
15. (a) The Company shall make its best efforts to secure and maintain in force comprehensive general liability insurance coverage as broad as the standard coverage form currently in use in the State of New Jersey which shall not be circumscribed by the endorsements limiting the breadth of coverage. The policy shall include an endorsement (broad form) for contractual liability, an endorsement for completed operations liability, an endorsement of Broad Form Property Damage Coverage and an endorsement for independent contractors coverage. The Company shall make its best efforts to have its underwriter(s) add and maintain the State of New Jersey as an additional insured through completion of the remedial action plan implemented pursuant to paragraph 10 of this Order, except that such coverage as an additional insured shall not apply to any negligence of the State of New Jersey. The policy shall be specifically endorsed to eliminate any exclusions for explosion, collapse and underground hazards (x, c, u). Limits of liability shall not be less than six (6) million dollars per occurrence and annual aggregate for bodily injury and for property damage combined.
 - (b) Within thirty (30) days or as soon as coverage can be effected after the effective date of this Order, the Company shall provide the Department with a current certificate of insurance certifying coverage. The certificate shall contain a provision that the insurance shall not be cancelled for any reason except after thirty (30) days written notice to the Department.
 - (c) To the extent that the Company is unable to secure or maintain the above coverage or to have the State

of New Jersey added as an additional insured, the Company shall indemnify the State to the same extent that said coverage would have provided the State as an additional insured.

16. (a) Within thirty (30) days after the effective date of this Order, the Company shall obtain and provide to the Department an irrevocable letter of credit in the amount of \$12 million to secure performance of all obligations under this Order. Said letter of credit shall be issued pursuant to the provisions of N.J.S.A. 17:9A-25(3) and shall not be automatically renewable but shall be renewable upon reapplication and review only. The Company shall maintain said letter of credit continually.

Within thirty (30) days after approval of a remedial action alternative by the Department pursuant to paragraph 10 of this Order, the Company shall amend the letter of credit to an amount equal to the estimated cost of fully implementing the approved alternative, including any operation and maintenance costs, if applicable.

- (b) 1. The Company shall establish a standby trust fund within thirty (30) days of the effective date of this Order.
2. This standby trust fund shall be the depository for all funds drawn by draft under the irrevocable letter of credit required by subparagraph 16(a), which funds shall be deposited into such trust fund promptly and directly by the issuing institution.
3. In the event that the Department determines that the Company has failed to perform any of its obligations under this Order, the Department may draw on the letter of credit; provided, however, that before any draw can be made, the Department shall notify the Company in writing of the obligation(s) with which it is not complying, and the Company shall have a reasonable time, not to exceed thirty (30) days, to perform such obligation(s). Should the Department determine that the Company has not corrected its non-performance, the Department shall give the Company fifteen (15) days advance notice in writing of its intent to draw on the letter of credit and of the

amount it intends to draw and have deposited in the standby trust.

- (c) At any time, the Company may apply to the Department for approval to reduce the amount of the letter of credit, or to substitute other financial assurances in a form and manner acceptable to the Department.
17. If any event occurs which purportedly causes or may cause delays in the achievement of any deadline contained in this Administrative Consent Order, the Company shall notify the Department in writing within ten (10) days of the delay or anticipated delay, as appropriate, describing the anticipated length, precise cause or causes, measures taken or to be taken and the time required to minimize the delay. The Company shall adopt all necessary measures to prevent or minimize delay.
18. If any delay or anticipated delay has been or will be caused by fire, flood, riot, strike or other circumstances alleged to be beyond the control of the Company, then the time for performance hereunder may be extended by the Department for a period no longer than the delay resulting from such circumstances, or 15 days whichever is shorter, provided that the Department may grant additional extensions for good cause. If the events causing such delay are not found to be beyond the control of the Company, failure to comply with the provisions of this Administrative Consent Order shall constitute a breach of the Order's requirements. The burden of proving that any delay is caused by circumstances beyond the Company's control and the length of such delay attributable to those circumstances shall rest with the Company. Increases in the costs or expenses incurred in fulfilling the requirements contained herein shall not be a basis for an extension of time. Similarly, delay in completing an interim requirement shall not automatically justify or excuse delay in the attainment of subsequent requirements.
19. The provisions of this Order shall be binding on Diamond Shamrock Chemicals Company and Marisol, Inc. and their independent agents, successors, assigns, and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.
20. No obligations imposed by this Order are intended to constitute a debt, claim, penalty or other civil action which could be limited or discharged in a bankruptcy proceeding. All obligations imposed by this Order shall

constitute continuing regulatory obligations imposed pursuant to the police powers of the State of New Jersey, intended to protect the public health, safety and welfare.

21. This Order shall take effect upon the signature of all parties.

RESERVATION OF RIGHTS

This Administrative Consent Order shall be fully enforceable in the New Jersey Superior Court upon the filing of a summary action for compliance pursuant to Executive Order No. 40 (1983) signed by Governor Thomas H. Kean on June 2, 1983, N.J.S.A. App. A:9-45, N.J.S.A. 13:1D-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. This Consent Order may be enforced in the same manner as an Administrative Order issued by the Department pursuant to these same statutory authorities and shall not preclude the Department from taking whatever action it deems appropriate to enforce the environmental protection laws of the State of New Jersey in any manner not inconsistent with the terms of this Order; provided, however, that upon the Company's satisfactory compliance with the provisions of this Order, the Department shall not require further remedial action by the Company with respect to the presence at 80 Lister Avenue in the City of Newark, New Jersey of dioxin (2,3,7,8-TCDD) or other chemicals identified in the site evaluation report approved by the Department. The parties recognize that this Consent Order is intended only to settle the Department's claims against the Company for the presence at 80 Lister Avenue in the City of Newark, New Jersey of dioxin (2,3,7,8-TCDD) and other chemicals identified in the site evaluation report approved by the Department, and agree that nothing herein shall be construed to address, resolve or settle any other matter or issue.

Marisol, Inc. and the Company consent to this Administrative Consent Order without admission of any liability and without admission of any issues of fact or law.

Diamond Shamrock Chemicals
Company

Date: MARCH 8, 1984

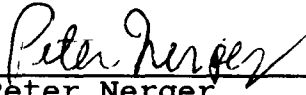
By: 
James F. Kelley
Vice-President

Date: MARCH 8, 1984

Witness: 
Corporate Secretary

Marisol, Inc.

Date: March 5, 1984

By: 
Peter Nerger
President

Date: Mar. 5, 1984

Witness: 
Corporate Secretary

NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Date: 3/13/84

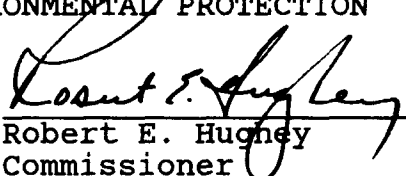
By: 
Robert E. Hughey
Commissioner

EXHIBIT A

SCOPE OF WORK

SITE EVALUATION AND FEASIBILITY STUDY

FOR

80 LISTER AVENUE

NEWARK, NEW JERSEY

SITE EVALUATION AND FEASIBILITY STUDY PROGRAM

1.0 The basic objectives of the program to be undertaken by the Company at 80 Lister Avenue are:

- Complete investigations to determine the extent of dioxin and other chemicals at the site. In order to determine the levels of other chemicals at the site, the Company shall conduct full USEPA priority pollutant scan analyses of representative soil and ground water samples with confirmation of all detectable organic compounds by gas chromatograph mass spectrometer (GC/MS) methodologies plus a forward library search of the EPA/NIH/NBS mass spectral library to tentatively identify: (1) 15 non-priority pollutants in the purgeable organic fraction; (2) 10 non-priority pollutants in the acid extractable organic fraction; and (3) 15 non-priority pollutant compounds in the base/neutral organic fraction. Substances with responses less than 25% of the internal standard are not required to be searched.
- Provide a secure site which will allow mobilization of personnel and equipment to perform the required tasks.
- Conduct feasibility studies of possible remedial actions based upon the results of the investigation.
- Make recommendation for remedial action program and schedule for implementation.

2.0 The Company shall provide in the program for the following:

- Evaluation of existing interim site stabilization measures and implementation of additional interim site stabilization measures, if necessary.
- Public health protection plan.
- Worker health protection plan.
- Safety and industrial hygiene plan.
- Site security plan.
- Compliance plan, New Jersey "Worker and Community Right to Know Act."

- Emergency (fire, evacuation, first aid, medical) action plan.
- Runoff and contaminated water storage, treatment and disposal plan.
- Plan for the prevention of the spread or recontamination of the area via vehicles, personnel, etc.
- Procedures for sampling, identification, and handling protocol.
- Analytical procedures.
- Quality assurance and quality control plan.

3.0 The specific items in the work plan are:

3.1 Buildings

- Determine dioxin levels by conducting wipe tests on the interior and exterior surfaces of the office building, warehouse and process buildings.
- If dioxin above what the Department determines to be acceptable levels is found in the office building and sections of the warehouse and cleanup of these areas appears reasonably feasible, then a cleanup program will be undertaken to permit the use of these areas for project operations.

3.2 Piping and Equipment

- Conduct wipe tests on the interior and exterior surfaces of outside storage tanks to determine levels of dioxin. Conduct wipe tests on all other items of equipment whose use is contemplated for storage and treatment of runoff or dioxin containing water.
- All inside process equipment, inside and outside piping, not contemplated for use for the storage, handling and treatment of runoff of water, will be assumed to contain dioxin and shall be so considered in the preparation of feasibility studies and remedial action plan recommendation.

- All below grade process piping shall be identified from point of origination to point of termination.

3.3 Soil Testing

- Initial soil samples taken to a depth of 12 inches at the nodes of a 50 x 50 foot or other mutually acceptable grid spacing, shall be analyzed for dioxin and other chemicals. This testing program shall extend to cover the entire site including areas currently paved or below existing structures. Soil samples shall also be taken of sediment in the Passaic River in such number and location as may be approved by the Department. Based upon the analyses of all initial samples, a determination shall be made, subject to the approval of the Department, regarding the need to conduct further sampling and analyses.
- Soil borings shall be taken and analyzed for dioxin and other chemicals on the same grid as discussed above to establish a depth concentration profile. Individual borings shall be taken to a depth determined by the Department to contain acceptable levels. Where adjacent borings reveal sharp changes with depths, resampling shall be done using a smaller grid.
- Erect a security barrier or other means of restricting access, as may be approved by the Department, to separate areas determined to contain dioxin.

3.4 Ground water

- Ground water monitoring wells shall be installed and samples collected to determine levels of dioxin and other chemicals in ground water. Number, location and depths of monitoring wells shall be subject to the approval of the Department. All wells shall be constructed in accordance with the Department's specifications.

3.5 Sanitary and storm sewers

- All below grade sanitary and storm water conveyance systems shall be identified from point of origination to point of discharge

off-site. All such systems shall be sampled to determine the levels of dioxin and other chemicals.

3.6 Ambient Air

- An ambient air sampling and monitoring program shall be established, subject to the approval of the Department. The monitoring program shall include dioxin, asbestos, volatile organics, particulate matter, metals and polycyclic aromatic hydrocarbons. This program will be used to establish existing baseline conditions and will permit future cleanup efforts to be monitored.

3.7 Drums in Storage

- The contents of all drums currently stored on the site, other than those drums stored on site pursuant to the Department's Administrative Order No. EO 40-18, shall be sampled and appropriate composites analyzed for the presence of dioxin. If dioxin is not found, drum contents shall be characterized sufficiently to permit off-site disposal as approved by government agencies. The proper disposal or containment of all drums stored on-site pursuant to Administrative Order No. EO 40-18 shall be addressed in the feasibility study for the site.

3.8 Geotechnical Investigations

- Studies shall be made to determine the characteristics of the soil underlying the site, including determination of soil types, depth of soil layers, and soil structure.
- Ground water flow volumes and directions as a function of depth shall be determined using wells drilled for this purpose. If appropriate, the ground water monitoring wells mentioned in Section 3.4 may be used for this purpose.

- 4.0 As information from the on-site investigations becomes available, initiate a feasibility study to identify and evaluate all potentially viable remedial action alternatives for the site. All such alternatives shall be subjected to an initial screening to narrow the list of potential remedial

actions for further detailed analysis. The following criteria shall be used in the initial screening of alternatives: (1) environmental and public health impacts, (2) engineering feasibility and reliability and (3) cost including operation and maintenance costs.

Subsequently, a more detailed evaluation shall be conducted of the limited number of alternatives that remain after the initial screening. These potentially viable remedial action alternatives shall be compared as to environmental and public health impacts, degree of confidence in success, time required for implementation and cost including operation and maintenance costs. Specifically, the detailed analysis shall include:

- A refinement and specification of each alternative in detail, with emphasis on use of established technology;
- An evaluation of each alternative in terms of engineering implementation including feasibility, reliability and constructability;
- An assessment of each alternative in terms of the extent to which it is expected to effectively mitigate and minimize damage to, and provide maximum protection of public health and welfare and the environment, relative to the other alternatives analyzed;
- An analysis of any adverse environmental impacts, methods for mitigating these impacts and costs of mitigation;
- A detailed cost estimation of each alternative including costs of engineering, construction and operation and maintenance costs and distribution of costs over time; and
- A detailed time schedule for implementation of each alternative.

The feasibility study shall result in a risk assessment and cost effective analysis of the remedial action alternatives considered and a recommendation of a remedial action plan.